# Hard TripleCross Puzzles 

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## Instructions

This puzzle is like a crossword, but with numbers. Each digit occupies a hexagonal cell and can be a part of a "word" in the across, up, and down directions.

## Rules:

1. "Words" may not start with a zero.
2. "Words" in the 'across' direction read from left to right.
3. "Words" in the 'up' direction read along the upward diagonal to the right.
4. "Words" in the 'down' direction read along the downward diagonal to the right.
5. There is one unique solution which satisfies all the clues given below.


Some "words" may not have clues. They will be determined by the "words" which intersect them.

## For More Puzzles

Please visit http://3DMathPuzzles.com for more TripleCross, CrossFigure, and 3D puzzles!

## About the Author

Neil Aggarwal loves puzzles. Sometimes he is solving an existing puzzle, sometimes he is figuring out how to create new ones. Computer programming is always a good source of puzzles. So is using a new ingredient or making a new recipe. Sometimes the puzzle is to figure out how to get his $4 \times 4$ vehicle across a challenging trail. Life is full of puzzles, and he enjoys all of them. He also loves spending time with his family, friends, and dogs -- who, at times, are puzzles too!

## Dificuly $\star \star \star \star$ 解

## Puzzle 1



## Across

1 Rearranged digits of 42 across
628 up plus 52 across
7 Last two digits are the same as last two digits of 42 across
10 Half of 43 down, then subtract 29 across
1122 down divided by 8 down
13 Three thousand three hundred fifteen less than 36 across
1615 down plus 32 down
18 Seventy-four times a square

## Up

830 up divided by nine
1234 up minus 41 up
17 Twice a prime number
1926 across minus 39 across
20 Mean of 52 across and 8 up
244 down divided by 24 down
25 Eighty-eight times a prime number
2718 across plus 26 across

## Down

2 Twenty-seven times a prime number
311 across reversed
4 Last three digits are the same as 9 down
522 down minus 29 across
7 Last two digits are the same as 49 up
8 Three times a prime number
945 across plus 41 up
14 Eight times a prime number

Across (continued)
21 Rearranged digits of 24 up
23 Two-fifths of 12 up
26 Three times a prime number
29 Forty-one times a prime number
33 Twice a prime number
35 Twelve times a prime number
36 Two hundred one less than 37 down
3930 up minus 3 down
42 Last two digits are the same as last two digits of 2 down
4434 up minus 24 down
4538 down reversed
47 Twenty-two thousand three hundred forty-five more than 18 across
52 Mean of 11 across and 53 down
54 A prime number

## Up (continued)

2810 across minus 30 up
3028 down plus 39 across
346 across minus half of 3 down

## Down (continued)

1523 across times 24 down
20 Twice the result of 30 up minus 39 across
22 Fifteen thousand five hundred twenty-nine more than 7 down
36 Twenty-three times a prime number 2433 across minus 34 up
37 Four times a prime number
40 Six times a prime number
4124 up divided by 11 across
46 Half of 14 down, then subtract 25 up
48 Seven times a prime number
49 Sum of digits in 34 down
50 Mean of 13 across and 8 up
51 Fifty-five times a prime number

54 Twice a prime number
557 across divided by 38 down

2820 down minus 3 down
301 across minus half of 31 down
31 Ten times a prime number
32 Mean of 11 across and 8 up
34 Three times a prime number
36 Twenty-nine times a prime number
37 Half of 5 down, then subtract 36 down
3845 across reversed

43 First two digits are the same as first two digits of 22 down
53 Sum of digits in 45 across

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## Puzzle 2



## Across

145 up divided by 43 across
517 up minus 37 down
7 Half of 25 across, then subtract 8 down
10 Mean of 39 down and 33 up
1150 down minus 15 across
1341 across plus 26 down
15 Mean of 8 up and 39 down
16 A square
19 Half of 13 across, then subtract 3 down

## Up

732 up minus 48 down
848 down plus 34 across
1743 across plus 37 down
18 Forty-six times 31 up
205 across minus 39 down
21 Mean of 1 across and 31 up
23 Nine thousand seven hundred twenty-seven less than 50 up
26 Mean of 29 down and 30 up
27 Mean of 30 up and 11 down

## Down

221 down minus 12 down
327 up plus 11 across
427 down minus 32 across

5 Mean of 5 across and 51 down
6 Eighty-three times a prime number
85 across minus 11 down
9 Twenty-five times 20 up
11 A square
12 Twenty-one times 23 down

## Across (continued)

2215 across minus 32 up
2451 down minus 22 across
25 Last two digits are the same as last two digits of 14 down
28 Half of 55 up, then subtract 29 up
3243 across minus 32 up
3443 across minus 27 up
36 Four times a prime number
38 Last two digits are the same as last two digits of 21 down
40 A square
41 Fifty-nine times 5 down
4311 down plus 8 down
4733 up minus 8 down
49 First two digits are the same as 43 across
5250 down divided by seven
54 Mean of 39 down and 44 up

## Up (continued)

29 Six thousand seven hundred fortyfour more than 25 across
3047 across plus 40 across
31 Mean of 48 down and 54 up
32 Mean of 22 across and 40 up
33 Mean of 27 up and 5 across
35 A square
40 Twice the result of 20 up plus 52 across
42 Twice the result of 12 down plus 3235 Three times a prime number across
44 Same as 1 across
4544 up times 43 across
506 down plus half of 18 up
51 A prime number
5334 across minus half of 22 across
54 Mean of 32 up and 15 across
55 Twenty-six times a prime number

## Down (continued)

1451 up minus 4 down
15 A prime number
21 Four times a prime number
23 A square
26 Eighty-five times a prime number
2723 down minus 7 up
2927 down times 40 across

37 First two digits are the same as 27 up
3943 across minus 20 up
40 Its digits total 47 across
4633 up minus 11 down
4815 across minus 31 up
5047 across plus 39 down
5126 down divided by 11 across

## Dificully $\star \star \star \star$ 解

## Puzzle 3



## Across

1 Last two digits are the same as 4 down
610 down minus 19 across
823 across minus 30 across
945 up plus 41 up
10 Mean of 24 down and 37 up
11 Half of 38 across, then subtract 5 down
1229 down minus 53 down

14 Rearranged digits of 11 down
15 One hundred thirty-four more than 17 across

Up
69 across minus 9 up
9 Mean of 48 across and 30 across
13 Thirty-five times a prime number
16 Eighty-four times a prime number
18 Nine times a prime number
19 Three thousand six hundred fiftyeight more than 55 across
20 Twice the result of 25 across minus 8 across
2126 up minus 50 across
2253 down reversed

## Down

1 Mean of 19 across and 16 down

2 Twenty-two times a square
344 up plus 50 across
437 down minus 44 up
529 down times 46 across
7 Five thousand five hundred one less than 42 down
8 Twenty-seven times a prime number
10 Eleven times a prime number
1111 across plus 10 across

## Across (continued)

17 Last two digits are the same as 40 down
19 Twice a prime number
23 Mean of 29 down and 37 down
25 Mean of 36 across and 20 up
2845 across minus 23 across
3040 down minus half of 37 down
32 Two hundred twenty-five more than 20 up
3632 down divided by 14 across

38 Twice a prime number
41 Nineteen thousand thirty-four less than 15 across
43 Three times a prime number
452 down minus 1 across
4644 up plus 51 across
483 down plus 10 across
49 Mean of 23 across and 4 down
50 Twenty-two times 51 across
514 down minus 6 up
5344 down minus 39 down
55 Mean of 15 across and 3 down

## Up (continued)

2451 across plus 4 down
26 Three times a prime number
2750 down minus 45 across
2946 across plus 42 up
3150 across times 4 down
3724 up reversed
4118 down minus half of 22 up
42 A square
4451 up divided by 30 across
4550 down minus 18 down
48 Mean of 39 down and 37 up
49 Seven times a prime number
51 Six hundred fifty-seven less than 473957 up minus 30 across down
5219 across minus half of 10 across
54 Twice a prime number
5531 down minus half of 7 down
56 Sixty-one times a square
57 Twelve times a prime number
58 Mean of 27 up and 24 down

## Down (continued)

14 Twenty-three times a prime number

15 Same as 23 across
16 Mean of 29 up and 36 across
18 Mean of 16 down and 29 down
24 Mean of 46 across and 24 up
2935 down minus 51 across
31 First two digits are the same as first two digits of 51 up
32 Ten thousand three hundred sixty less than 16 up
33 Five times 11 down
3448 across plus 28 across
3541 across divided by 21 up
37 Twice 22 up

4044 up reversed
42 A prime number
441 down plus 26 up
4753 across minus 29 up
5040 down plus 45 across
5328 across minus 58 up

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## Puzzle 4



## Across

2 Half of 52 across, then subtract 2 down
321 across minus 10 down
443 across times 42 up
612 down plus 3 across
931 down times 55 across
1142 down minus 57 across
1418 across minus half of 34 up
16 Mean of 3 down and 58 down
18 Twice 51 up
2110 up minus 31 down

## Up

4 Mean of 44 down and 6 across
5 Mean of 55 across and 29 down
7 Twice the result of 38 across plus 54 up
851 up minus 10 down
10 Mean of 2 across and 22 up
15 A prime number
1831 across plus half of 62 up
20 Mean of 2 down and 22 up
2266 up plus 33 across
23 Four times a prime number

## Down

153 down divided by three
217 down plus 44 down
3 Twenty-three times a prime number
42 down plus 43 up
5 Mean of 22 up and 21 across
10 A square
12 Mean of 27 down and 30 down
133 across times 59 across
15 Mean of 18 up and 40 up
1727 down plus 46 down

## Across (continued)

2420 up minus 43 across
2647 across minus 40 up
2864 up minus 39 up
3139 across minus 4 down
3320 up minus 5 up
354 down plus 8 up
3854 up minus 49 down
39 Twice the result of 33 across minus 6 across
412 across minus 38 across
4324 across plus 54 up
459 across minus 5 up
4734 down plus 58 up
49 Forty-four times a prime number
5240 down plus 34 down
55 A cube
5710 down minus 32 down
592 across plus 34 down
6056 up plus half of 27 up
6253 up minus 21 across
6431 down plus 44 down

## Up (continued)

2535 across minus 15 down
2758 down minus 10 up
3411 across minus 62 up
39 Twice a prime number
4045 across minus 66 up
42 A cube
4325 up minus 42 up
48 Mean of 4 down and 3 down

5161 up plus half of 15 down
5343 up plus 27 down
5440 up minus 58 down
55 Half of 19 down, then subtract 34 down
565 down reversed
5852 across minus 31 down
61 Mean of 4 up and 2 across
6246 down minus 51 up
63 Mean of 35 across and 47 across
64 Nine times a prime number
6530 down minus 55 across
668 up plus 31 down

## Down (continued)

18 Mean of 64 across and 54 up
1935 across minus 4 up
27 Mean of 11 across and 34 up
2952 down minus 47 across
3034 up plus 44 down
31 A square
3246 down minus 51 up
34 Mean of 3 across and 5 up
36 Mean of 31 across and 10 down
37 Six times a prime number
4052 across minus 31 across
4253 up minus 3 across
441 down minus 61 down
463 across plus 55 up
49 Sum of digits in 37 down
50 Thirteen times a square
5252 across plus 32 down
5310 down plus 4 up
5828 across minus 41 across
6111 across minus 38 across

## pififuly: $\star \star \star \star \hat{c}^{2}$

## Puzzle 5



## Across

1 Seventy times a prime number
4 Two-thirds of 45 across
78 up plus 25 up
9 Mean of 9 down and 3 down
1133 across minus 51 up
13 A prime number
1528 down minus 13 across
16 Mean of 53 up and 43 across
1948 across minus 8 up
21 Half of 19 across
23 Twenty-four times a prime number

## Up

7 Mean of 51 up and 45 down
843 up minus 22 up
1233 across plus 17 down
14 Same as 15 down
19 Mean of 41 up and 39 up
2040 across minus 33 across
21 Twice a prime number
22 Mean of 19 up and 25 up
24 A prime number
2548 down plus 11 across
2640 up minus 42 up

## Down

1 Mean of 43 across and 46 down
215 across minus 20 up
340 across divided by sixteen
5 Mean of 21 up and 21 across
6 Twice the result of 41 across minus 37 across
731 across plus half of 23 across
97 across minus 45 across
1026 up minus 25 up
11 Twenty times a prime number
15 Eighty-five more than 1 down
17 One thousand four hundred sixtyseven more than 24 up

## Across (continued)

2545 across plus 42 up
27 Last two digits are the same as 20 up
31 Sixteen times 26 down
3336 down plus 25 up
3436 down minus 48 down
37 Mean of 41 across and 42 up
4040 up minus 11 across
41 A prime number
42 Mean of 48 down and 41 up
431 down plus 42 across
452 down minus 19 across
4839 up reversed
50 Three thousand two hundred seven more than 5 down

## Up (continued)

31 Eighty-two times a square
38 Twelve times a prime number
3948 across reversed
40 Mean of 40 down and 14 up
411 down minus 33 across
4225 across minus 53 up
4340 down minus 20 up
44 Mean of 37 across and 27 across
47 Mean of 45 down and 4 across
49 Mean of 50 across and 27 across
5136 down plus 48 down
52 Sixteen times a prime number
53 Mean of 20 up and 43 across 488 up minus 19 across

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## Puzzle 6



## Across

133 across plus 5 down
2 Mean of 55 across and 46 across 5 Mean of 42 up and 11 across
6 Five hundred more than 8 down
8 Eight times a prime number
11 Mean of 4 down and 58 across
12 Mean of 14 down and 22 across
14 Three times a square
16 Nine thousand four hundred eighty- 2558 across minus 42 up seven more than 15 down

## Up

755 across divided by 54 across
829 across minus 45 up
9 A square
10 Rearranged digits of 8 up
14 Twelve times a prime number
15 Five thousand four hundred fiftyseven more than 38 up
17 Mean of 47 down and 58 across

## Down

1 Mean of 55 up and 59 up
2 Seven times a prime number
314 down minus 21 up
4 Three-fourths of 46 across
5 A square
6 Three times a prime number
8 Half of 57 up, then subtract 17 down
9 Mean of 50 down and 9 up
13 Five thousand four hundred thirtyfive less than 2 down

## Across (continued)

2037 up plus 12 across
22 Mean of 44 across and 52 down
249 up minus 27 up
2530 up times 31 across
26 Mean of 13 down and 58 across
29 Mean of 49 down and 5 across
3150 down minus 32 down
33 Mean of 37 up and 54 across
3546 across plus 21 up
38 Twenty-six times a prime number
41 Forty-one times a prime number
44 Mean of 11 across and 56 up
46 Mean of 44 across and 24 across
4816 across minus 8 across
51 Five thousand three hundred eighty-eight more than 26 across
5427 up minus 42 up
55 Thirty-two times a prime number
58 Mean of 22 across and 44 across

## Up (continued)

2714 across divided by 9 up
28 Twenty-two times a prime number
3052 down divided by three
3147 down minus 14 down
3429 across minus 8 up
37 A cube
38 Rearranged digits of 58 up
40 A prime number
4210 up divided by 27 down
43 Eleven times a prime number
44 Mean of 7 up and 6 across
45 Same as 23 down
53 Same as 47 down
55 A prime number
5637 up plus 53 up

## Down (continued)

1432 down minus 54 across
15 Nine thousand eight hundred one more than 48 across
1718 down minus 25 up
1835 across plus 11 across
19 Thirty-three times a prime number
2327 up plus 27 down
2510 up minus 9 down
2711 across minus 3 down
2815 up plus 25 down
32 Twice the result of 25 up minus 7 up
361 across minus half of 35 across
3938 across minus half of 14 up
4027 up times 18 down
478 up minus 44 across
492 across minus 45 up
508 up minus 46 across
58 Fourteen thousand eight hundred twenty-nine more than 39 down
5949 down minus 31 across

51 Mean of 31 up and 33 across
5253 up plus 54 across

## pififuly: $\star \star \star \star \hat{c}^{2}$

## Puzzle 7



## Across

1 Two thousand two hundred four less than 1 down
517 down plus 37 up
722 up divided by 44 up
10 Mean of 27 down and 30 up
1134 down plus 17 across
1244 up plus 26 up
135 across minus 53 up
1538 across plus 47 down
17 Mean of 53 up and 30 up
20 Twenty times a prime number

## Up

6 A square
817 down reversed
14 Twice the result of 16 up minus 25 across
1510 across plus 45 down
16 Twenty-nine times 40 across
2131 down plus 34 down
227 across times 41 across
2338 across plus 8 up
24 Its digits total 31 down
256 up minus 23 up

## Down

1 Five thousand seven hundred thirtyfive less than 51 across
242 down minus 48 down
3 Mean of 8 up and 38 across
4 Seven times 53 up
5 A square
928 down minus 21 down
1020 across plus 52 up
17 Mean of 25 up and 2 down
1828 across plus 53 up
1928 up minus half of 34 down

## Across (continued)

22 One thousand four hundred twelve less than 1 down
25 Mean of 5 down and 34 down

2848 down minus 31 down
29 A prime number
32 Twice a prime number
3842 down minus 32 up
3933 down minus 41 across
4045 across plus 17 across
4128 up minus 37 up
43 Mean of 15 across and 47 down
4515 across minus 17 down
46 Mean of 20 across and 11 across
4911 across plus 6 up
51 Seven thousand nine hundred thirty-nine more than 1 across

## Up (continued)

26 Mean of 45 across and 45 down

285 down plus 32 up

3018 down minus 23 down
315 across plus 15 across
3242 down minus 25 up
3640 across minus 44 up
372 down plus 25 up
44 Mean of 3 down and 38 across
46 Seven times a prime number
50 Its digits total 28 across
5138 across plus 36 up
52 Three times a prime number
5312 across minus 39 across
5422 across divided by 8 up

## Down (continued)

2142 down times 27 down

22 Three hundred forty less than 32 across
2351 up minus 45 down
2715 across minus 30 up
28 Last two digits are the same as 44 up
30 Ten times a prime number
31 Mean of 25 across and 8 up
33 Sum of digits in 1 down
3415 across minus 45 down
3546 up minus half of 12 across
4248 down plus 6 up
45 Mean of 8 up and 18 down
4749 across minus 18 down
48 Mean of 10 across and 23 up

## pififuly: $\star \star \star \star \hat{c}^{2}$

## Puzzle 8



## Across

135 up times 29 down
412 across minus 52 up
611 down plus 35 up
8 Eight hundred thirty-three less than 17 Fourteen times 33 up 31 down
126 across minus 15 down
13 Four thousand forty-eight more than 46 up
1616 down minus 32 across
18 Mean of 6 up and 16 down
20 Three times a prime number

## Up

632 across minus 52 up
918 across plus 48 across
10 A cube

19 A prime number
20 Six times a prime number
23 Consecutive digits unordered
26 Twenty-four times a prime number
27 Mean of 47 down and 22 across

## Down

1 Eight times a prime number
2 Rearranged digits of 37 down
330 down minus 24 across
444 down minus 11 down
5 Mean of 51 up and 17 up
7 Fifty-eight times a prime number
1144 down minus 47 down
14 Last two digits are the same as last two digits of 29 down
1516 across minus 37 up

## Across (continued)

2245 across divided by 4 across
244 down plus 47 down
25 Four times a prime number
28 Thirty-five times a square
3139 across minus 30 down
32 Mean of 27 up and 27 down
34 Three hundred seventy-three less than 42 down
37 A prime number
39 Seven times 24 across
41 A prime number
4350 across minus 31 across
45 Sixty-four times a prime number
48 Forty-one times 52 up
5038 down minus 45 up
52 Five hundred eighty-one more than 14 down

## Up (continued)

291 across divided by 35 up
31 Twice the result of 43 across minus 20 A prime number 54 up
3352 across divided by 44 down
35 Mean of 44 down and 31 across
366 across times 3 down
37 Thirty-four times 52 up
40 Sixty-nine times a square
4510 up minus 33 up
46 Twice a prime number
48 Seventy-six more than 1 down
49 Mean of 25 across and 26 up
51 Ten times a prime number
5210 up minus 11 down
5314 down minus half of 40 up
5411 down reversed

## Down (continued)

1650 across minus 10 up

2145 up times 12 across
2324 across minus 52 up
24 Mean of 3 down and 9 up
27 Mean of 24 across and 6 up
29 Same as 29 up
30 A prime number
31 Five thousand two hundred ninetyone less than 7 down
33 Six thousand twenty-six less than 46 up
3713 across minus 20 up
38 A prime number
42 Twenty-nine times a prime number
4448 across minus 54 up
47 Mean of 23 down and 52 up

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## Puzzle 9



## Across

1 Mean of 30 up and 57 up
513 across minus 59 up
750 across minus 24 up
841 down divided by 16 up
919 up minus 42 across
11 Three-fifths of 56 across
1313 down plus 9 down
14 Three times a prime number 17 Mean of 49 up and 3 down 1935 up times 41 up

## Up

5 Mean of 56 across and 3 down
8 Six times a prime number
12 Twenty-six times a prime number
1623 across plus 33 down
18 First two digits are the same as 18 down
199 down plus 42 across
20 Mean of 29 across and 33 down
2127 across plus 59 up
2254 up minus half of 48 down
24 Mean of 20 up and 38 down

## Down

1 A prime number
2 First two digits are the same as 14 down
319 across divided by 35 up
45 up plus 58 up
640 across times 28 up
929 across minus 38 down
1051 across plus 27 across
13 Thirteen times 46 down
14 A square
15 Twice the result of 45 across plus 5 across

## Across (continued)

23 Mean of 3 down and 39 up
25 Mean of 26 up and 54 up
2711 across plus 53 across
2954 up divided by 47 across
31 Twice the result of 36 across plus 20 up
3439 up minus 22 up
3622 up plus 54 up
406 down divided by 50 across
42 Consecutive digits unordered
45 Mean of 59 up and 8 across
4718 down plus 28 down
5021 up minus 13 down
51 A prime number
53 Half of 8 up, then subtract 13 across
5628 down minus half of 14 down
58 First three digits are the same as first three digits of 4 down

## Up (continued)

2611 across plus 23 across
28 Same as 50 across
30 Three times a prime number
3558 up minus half of 19 across
3934 across plus 7 across

4144 up minus 11 across
43 A square
4424 down plus 5 up
49 Eleven times a prime number
50 Fourteen times a prime number
52 Two-fifths of 18 up
5436 across minus 7 across
57 First two digits are the same as 53 across
5855 down times 39 up
59 A prime number
6044 up minus 41 up

## Down (continued)

1623 across minus 27 across
1828 up minus 24 down
24 A square
28 Mean of 39 up and 60 up
3021 up minus 20 up
31 Twice a prime number
32 Seven times 28 down
335 up minus 16 down
35 A square
37 Nine times a prime number
38 A square
41 First two digits are the same as 41 up
43 Sixty-five times a prime number
46 Half of 44 up, then subtract 55 down
48 First two digits are the same as first two digits of 49 up
5539 up minus 34 across

## pififuly: $\star \star \star \star \hat{m}^{2}$

## Puzzle 10



## Across

146 up plus 1 down
339 down minus 5 across
530 across minus 40 down
7 Mean of 29 up and 50 across
9 Twelve times a prime number
1449 up minus 44 down
1531 across plus 48 across
1815 across plus half of 3 down
20 Mean of 37 down and 24 across
2215 up divided by six
2430 across minus 44 down

## Up

446 across minus 40 down
8 Mean of 25 across and 11 up
10 Sum of digits in 3 across
115 across minus 24 across
15 Mean of 50 across and 43 down
16 Last two digits are the same as last two digits of 15 up
17 Mean of 2 down and 12 down
1942 down minus 30 across
21 Same as 25 across
243 across minus 22 across
265 across plus 24 down

## Down

15 across plus 16 down
21 across minus 6 down
3 A square
611 up plus 23 down
813 down minus 47 up
1217 up plus 36 across
1319 up minus 3 down
15 A prime number
1633 down minus 11 up
1724 across plus 30 across
1916 down times 20 across

## Across (continued)

2548 across divided by 14 across
27 Mean of 13 down and 49 up
2943 up divided by 24 across
30 Mean of 44 down and 17 down
316 down minus 40 down
34 Mean of 36 across and 46 up
3644 across plus 51 up
3817 down plus 14 across
41 Three times a square
4424 up minus 30 across
46 A cube
4814 across times 21 up
5026 down plus 36 across

## Up (continued)

29 Mean of 15 up and 33 down
32 Mean of 37 down and 13 down
33 Mean of 1 across and 44 across
3517 up divided by 51 up
3711 up plus 43 up
41 Mean of 23 down and 3 across
4322 across plus 45 up
4516 down plus 33 up
46 Mean of 21 down and 44 down
4724 across plus 26 down
4915 up divided by 11 up
51 Mean of 8 down and 49 up
52 Twenty-eight times a prime number 44 A square

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## Puzzle 11



## Across

123 down plus 42 down
3 Mean of 40 down and 36 up
5 Three times a prime number
71 down plus 25 across
9 Mean of 4 down and 8 down
1045 up times 29 up
132 down minus 1 across
1723 down plus 37 across
18 A prime number
2113 down minus 33 up
2410 across divided by 45 up

## Up

4 Mean of 23 down and 5 down
540 down plus 38 up
61 down minus 4 up
1113 up plus 47 up
12 Mean of 30 across and 39 down
13 Mean of 33 up and 45 up
14 Thirteen times a prime number
164 down plus 30 across
17 Four times a prime number
28 A palindrome
29 Mean of 19 down and 3 across

## Down

1 Mean of 11 up and 38 up
2 A prime number
421 across plus 35 across
516 up plus 22 down
720 down divided by 21 across
813 across plus 12 up
946 up reversed
13 A cube
14 Eighty-five times a prime number
15 Mean of 34 up and 14 up
19 Seven times a prime number

## Across (continued)

2531 down minus 13 down
27 A prime number
30 Mean of 13 across and 40 down
3225 across plus 1 down
33 A prime number
35 Mean of 9 across and 44 across
37 Mean of 39 down and 23 down
411 down times 5 up
449 across minus 4 up
46 Mean of 5 up and 48 up

Up (continued)
33 Twice the result of 23 down minus 22 down
34 Last two digits are the same as 44 across
362 down minus 17 across
377 across minus half of 11 up
38 Mean of 46 across and 17 across
401 across times 45 up
45 A square
46 Last two digits are the same as 8 down
476 up plus 25 across
48 Mean of 4 down and 31 down

## Down (continued)

207 down times 6 up
224 up divided by four
2335 across minus 3 across
26 A prime number
311 down minus 3 across
3313 across minus half of 13 up
3940 up divided by 13 down
40 Twice the result of 25 across minus 21 across
429 across minus 23 down
43 Mean of 4 down and 22 down

## pififuly: $\star \star \star \star \hat{c}^{2}$

## Puzzle 12



## Across

18 up minus 5 down
327 down minus 46 across
6 Twenty-eight times a prime number 1015 across minus 22 down
7 Four times a prime number
9 Fifty-four times a prime number
12 Mean of 22 down and 28 down
1450 across plus 29 across
1521 down divided by 5 down
18 Thirteen times a square
21 Last two digits are the same as 25 up

## Up

840 down reversed
925 up plus 24 across
124 down minus 44 down
139 down minus 31 down
14 Twice the result of 35 across minus 14 across
1723 up minus 46 up
2329 across plus 18 down
2415 across times 27 across
25 Mean of 17 up and 15 across

## Down

1 Mean of 30 across and 47 across
2 Eighty-five times a square
3 Three times a prime number
49 across divided by 46 up
510 up plus 46 up
6 Mean of 40 up and 12 across
913 up plus 12 across
11 Mean of 26 across and 10 up
1615 across minus half of 17 up
18 Mean of 22 down and 5 down

## Across (continued)

2438 up plus 50 across
2646 up plus 28 down
2724 up divided by 8 up
2812 up minus 23 up
293 across divided by 38 across
3023 up minus 10 up
3147 up times 40 up
3549 up minus 27 down
3827 up minus 48 up
40 A square
41 Mean of 15 across and 17 up
42 Twelve times a prime number
45 Twice the result of 49 up minus 43 down
4640 across plus 36 up
4727 across minus 11 down
50 A square

Up (continued)
2711 down reversed
29 A square
33 Mean of 47 up and 18 down
348 up minus 18 down
3518 across plus half of 45 up
3650 across plus 38 across
3824 across minus 48 up
39 Eight thousand eighty-six more than 21 across
40 Half of 42 across, then subtract 21 across

45 Forty-four times a prime number
4624 across minus 40 up
47 Eleven times 41 across
48 A square

49 Forty-six times a prime number
5019 down plus 47 across
51 Rearranged digits of 27 across

## Down (continued)

19 Thirteen times a prime number
20 Seven times a prime number
218 up times 5 down
2241 down divided by twelve
2747 up minus 10 up
28 Mean of 34 up and 48 up
30 Mean of 28 down and 38 up
31 Mean of 45 down and 38 up
32 Four times a prime number

36 Thirteen thousand seven hundred eighty-two more than 45 up
37 Thirteen thousand four hundred twenty more than 36 down
4031 across divided by 47 up
4127 down minus 40 up
43 Three times a prime number 4450 across plus 48 up
45 Same as 14 across

## pififuly $\star \star \star \star \dot{\sim}$

## Puzzle 13



## Across

1 Mean of 50 up and 5 up
5 Mean of 6 down and 13 down 85 across divided by 38 across
1014 down minus 3 down
12 Seventy-one times a prime number
1628 up minus 46 across
1737 down times 5 up
20 Mean of 4 down and 46 up
23 A prime number
2551 across plus 1 across

## Up

5 Mean of 15 up and 40 down
1147 up plus 38 across
14 Mean of 15 up and 48 across
1526 down minus 33 across
1851 up plus 5 across
1947 up minus 45 down
2121 down minus 46 across
2217 across minus half of 11 up
2827 across plus 5 up
3051 across minus 2 down

## Down

2 Mean of 47 up and 1 across
314 down minus 25 across
410 across minus 51 up
6 Half of 21 down, then subtract 33 across
748 across minus 42 up
921 up minus 19 up
1222 up minus 30 up
1333 across plus 18 up
14 Seven thousand one hundred less than 24 down
1626 down minus 46 across

## Across (continued)

2625 across minus 13 down

27 Sum of digits in 23 across
292 down minus 1 across
31 A prime number
33 Mean of 40 down and 2 down
36 Mean of 10 across and 8 across

38 Same as 37 down
39 Fifteen thousand nine hundred forty-two less than 31 across
44 Seventeen times a square
4630 up reversed
4813 down minus 44 up
51 Twice the result of 29 across minus 12 down

## Up (continued)

32 Three hundred seventy-nine less than 23 across
34 Seven times a prime number
35 Five times a prime number
38 Ninety-one times a prime number
42 Mean of 41 down and 40 down
43 Mean of 6 down and 50 up
44 Twice the result of 48 across minus 21 up
4647 up minus 2 down

4711 up minus 37 down
4930 up plus 17 across
5021 up minus 45 down
511 across minus 44 down
511 across minus 44 down

## Down (continued)

21 A square

24 Mean of 12 across and 38 down
2650 up plus half of 7 down
3051 across plus 33 across
3248 across plus 51 up
34 Nine thousand four hundred twenty-five less than 34 up
375 across divided by 8 across

3842 up minus 46 up
4044 down minus 15 up
4144 across plus 43 up
444 down minus 51 across
4532 down minus 14 up

## 

## Puzzle 14



## Across

1 Five times a prime number
5 Half of 25 up, then subtract 24 across
722 down plus 34 up
8 Mean of 32 across and 28 across
11 A square
12 Mean of 54 across and 6 up
1420 down minus 22 down
16 Mean of 36 down and 20 down
18 Twenty-four times a prime number
2162 up times 20 down
2436 across minus 14 across

## Up

631 up plus 39 down
1113 down plus 40 across
15 Mean of 40 across and 57 across
1937 down minus 39 up
20 A palindrome
226 up divided by four
2342 across plus 34 up
248 across plus 51 up
2527 down plus 39 down
27 A square
2938 across plus 50 down

## Down

2 Mean of 53 up and 63 up
361 up divided by 43 down
4 Mean of 58 across and 11 down
9 Mean of 33 up and 41 down
10 A prime number
11 A square
1224 up plus 34 up
1334 down plus 55 across
1616 across plus 34 up
17 Mean of 31 down and 15 up
20 Mean of 39 up and 11 up

## Across (continued)

26 Mean of 63 up and 54 up
2831 up plus 6 up
3011 up minus 38 across
32 Mean of 30 across and 39 up
36 Mean of 34 down and 11 up
3839 up reversed
4054 up plus 14 across
42 Fifty-five times a prime number
45 Twelve times a prime number
4731 up plus 47 up
49 Mean of 48 up and 46 up
5112 down minus 34 up
54 Twenty-two times 11 down
5551 up minus 52 up
57 Mean of 35 up and 55 across
5846 up plus 43 down
6044 up plus 35 down

## Up (continued)

3140 across minus 27 up
33 Fifty times a prime number
34 A cube
35 Mean of 22 up and 52 up
3929 up minus 40 across
44 Mean of 31 up and 8 across
46 Mean of 55 across and 44 up
47 Twice the result of 24 up plus 48 up 36 A prime number
48 Mean of 38 across and 24 across
5123 down plus 36 across
5246 up plus 4 down
53 Seventeen times a prime number
54 Mean of 19 up and 7 across
5910 down plus 16 across
6132 across times 3 down
62 Mean of 19 up and 41 down
6330 across minus 22 up

## Down (continued)

2217 down minus 54 up
2322 down plus 11 down
2729 up minus 32 across
31 Mean of 23 down and 56 down
33 A prime number
3415 up minus 13 down
3560 across minus 35 up
3727 up minus 22 down
3931 up minus 22 up
41 Four times a prime number
43 Mean of 63 up and 57 across
44 Last two digits are the same as 40 across
4632 across minus half of 26 across
5034 up reversed
5454 across minus 24 across
5650 down minus 49 across

## pififuly: $\star \star \star \star \dot{3}$

## Puzzle 15



## Across

1 Half of 41 up, then subtract 46 up 258 up minus 25 down 458 up times 1 across

633 across minus 22 up
826 across minus 31 down
9 Seventy-seven times 41 up
11 Mean of 25 down and 23 down
13 Mean of 2 across and 34 up
168 down plus 24 across
18 Two-thirds of 25 down
2018 across plus 21 down

## Up

625 down plus 28 across
8 Mean of 42 across and 31 up
1014 down plus 18 across
11 Mean of 27 down and 5 down
1247 down plus 17 up
14 Seven times a prime number
1734 up plus 51 down
19 Twenty-one times a prime number
228 down plus 24 across
2362 up minus 20 across
2736 up plus 25 down

## Down

142 across times 11 across
2 Fifty-two times 42 across
3 First two digits are the same as 24 across
457 up minus 6 down
57 down minus 46 up
636 up plus 58 up
7 Mean of 41 up and 30 down
834 up minus 18 across
1443 up divided by 63 up
1555 across minus 25 down
17 First two digits are the same as 30 up

## Across (continued)

22 A prime number
2419 up minus half of 64 up
268 across plus 11 across
28 Sum of digits in 17 down
29 A prime number
32 Mean of 52 down and 13 across
336 across plus 16 across
35 A square
37 Seven times a prime number
4058 up minus 41 up
421 down divided by 52 down
4460 up plus 32 across
48 A square
506 up minus 8 up
5263 across plus 11 up
5515 down plus 43 down
5716 across times 44 across
5933 up minus 6 up
61 Mean of 8 down and 36 up
63 Mean of 27 up and 1 across

## Up (continued)

3049 down divided by 7 down
315 down minus 51 down
334 across minus 40 across
3423 up plus 41 up
3618 across minus 8 up
3833 across minus 14 down
3932 across times 23 down
409 across minus 10 up
418 up plus 2 across
43 Nine thousand thirty-one more than 335 down plus 31 up 29 across
4558 up plus 23 up
4654 down minus 32 across
4937 across minus 57 up
574 down plus 33 down
5830 up minus 2 across
6027 up minus 2 across
614 across plus 33 down
62 A square
63 Mean of 22 across and 6 up
64 Twenty-six times a prime number

## Down (continued)

195 down minus 31 down
2027 down minus 4 across
21 Mean of 1 across and 28 across
22 Four times a prime number
232 down minus 14 up
25 Mean of 31 up and 17 up
27 Nine times a prime number
3051 down plus 49 up
3121 down plus 23 up
335 down plus 31 up
34 Same as 50 across
4319 down plus 13 across
4522 across minus half of 31 up
47 Sixteen times a prime number
49 Seventy-two times a prime number
51 Mean of 61 across and 32 across
52 Mean of 23 up and 60 up
5341 up plus 59 across
541 across plus 31 down
56 Mean of 35 across and 34 up

## pififuly: $\star \star \star \star \hat{c}^{2}$

## Puzzle 16



## Across

1 Four times a prime number 655 across minus 17 across

84 down times 42 across
11 Half of 15 up, then subtract 44 down
12 Mean of 39 down and 28 down
1321 up divided by 23 down
15 Nine thousand eight hundred twenty-one more than 56 up
17 Half of 6 across, then subtract 34 up

## Up

948 up plus 19 across
1415 down minus 36 up
15 First three digits are the same as first three digits of 21 down
16 A square
18 Its digits total 2 down
19 Sixty-four times a prime number
2113 across times 51 up
2333 down minus 46 across

## Down

235 across minus 16 up
3 One thousand six hundred sixtyseven less than 15 up
443 up minus 49 across
5 A cube
6 Rearranged digits of 38 up
7 Two thousand one hundred fifty less than 59 up
1024 down minus 36 up
1150 across minus 24 across

## Across (continued)

19 A square
20 Mean of 19 across and 12 across
22 Mean of 48 up and 51 up

24 A prime number
2619 up minus 55 across
29 A prime number
33 Sixty-three times a prime number
3528 down minus half of 33 up
38 Four times 2 down

4053 down reversed
4239 down minus 11 down
43 Fifty-four times a prime number
46 One thousand one hundred eighty more than 38 up
4935 across minus 39 down
50 Five times a prime number
52 Five times a prime number
5540 across plus 51 up
57 A prime number

## Up (continued)

286 across plus 39 down
3054 down plus half of 19 across
Twenthree times a prime number
3238 across minus 17 across
33 Mean of 5 down and 53 down
3455 across minus 27 down
36 Mean of 30 up and 11 down
37 Twice a prime number
38 Twice the result of 37 up plus 40 across
4327 down times 5 down
4843 up divided by 27 down
5133 up minus 25 down
53 One thousand five hundred twenty- 41 Nine times a prime number six more than 1 across
56 Forty-two times a prime number
57 Twice a prime number
58 Mean of 14 up and 36 up
59 Four times a prime number
60 A prime number

## Down (continued)

13 A prime number
1555 across plus 2 down
16 Twelve thousand six hundred sixtyone more than 13 down
21 Last two digits are the same as 49 across
2330 up minus 32 up
24 Seventeen thousand one hundred nine less than 21 up
2558 up minus 14 up
275 down plus 33 up
286 across plus 58 up
33 A prime number
36 Twenty-eight times a prime number
3932 up minus 14 up

4427 down plus 43 up
4516 down divided by 39 down
47 Mean of 33 up and 58 up
53 Half of 28 up, then subtract 22 across
5428 up minus 39 down

## pififuly: $\star \star \star \star \hat{c}^{2}$

## Puzzle 17



## Across

1 Four thousand two hundred sixteen less than 12 down
5 Mean of 8 down and 20 up
6 Mean of 10 across and 10 down
101 down plus 22 down
11 Twelve times a prime number
15 A square
17 Mean of 30 down and 18 across
18 Mean of 8 down and 30 down
19 One thousand five hundred twentythree more than 39 across

## Up

4 Half of 1 across, then subtract 11 across
5 Mean of 34 up and 10 across
637 down plus 10 across
9 Mean of 37 down and 25 up
14 A prime number
182 down plus 33 up
20 Mean of 23 across and 20 down
21 Mean of 3 down and 10 across
2516 down divided by three

## Down

117 across minus 24 across
2 Seventy-six times 14 up
3 Fifteen times a prime number
723 down minus 18 across
8 Mean of 10 across and 34 up
1018 across plus 23 across
12 Eleven thousand five hundred eighty-nine less than 3 down
1322 across reversed
166 across minus 18 across

## Across (continued)

2217 across minus 25 up
236 up minus 41 up
2438 up minus 30 down
29 Twice the result of 28 down plus 3034 Mean of 20 up and 30 down down
31 Mean of 23 down and 24 across
34 Thirty-eight times a prime number
3634 across minus 26 down
39 First three digits are the same as 6 up

Up (continued)
28 Mean of 27 down and 10 down
32 Half of 40 up, then subtract 22 down
33 A prime number

35 A prime number
38 Mean of 10 across and 4 up
40 Four times a prime number
4110 down minus 20 down

## Down (continued)

20 Mean of 41 up and 5 up
2236 across reversed
23 Rearranged digits of 26 down
2634 across minus 9 up
27 One thousand six hundred twentythree more than 12 down
28 Two thousand nine hundred more than 33 up
3020 up minus 25 up
37 Mean of 36 across and 5 across

## Dificuly $\star \star \star \star$ 解

## Puzzle 18



Across
1 A square
4 Eight times a prime number
7 One thousand nine hundred eleven more than 49 up
10 Seventeen times a prime number
12 Mean of 5 down and 2 down
1412 across minus 42 across
1622 down plus 30 down
1824 up reversed
20 Twice a prime number

## Up

5 Mean of 54 across and 5 down
9 Mean of 53 up and 7 down
1326 down minus 38 across
17 Mean of 14 across and 19 down
21 Four times a prime number
2432 down plus 40 across
25 A prime number
2619 down minus 17 up
2715 down plus 7 across

## Down

1 One thousand five hundred thirtyone more than 30 up
26 down plus 14 across
3 A prime number
546 up plus 52 down
6 Half of 23 across, then subtract 28 up
746 up plus 45 down
8 Ten times a prime number
1125 up minus 38 across
15 Fourteen times a prime number

## Across (continued)

23 Mean of 16 across and 9 up
24 Twice the result of 43 up minus 54 up
27 Eighty-four times a prime number
29 Seventy-four times 46 up
31 A prime number
3339 up minus half of 1 across
353 down plus half of 21 up
3840 across plus 47 down
40 Mean of 17 up and 30 down
4252 up minus 44 across

4446 up minus 30 down
46 Seven times a prime number
4818 down minus half of 46 down
5146 down times 9 up
54 A square

## Up (continued)

28 A cube
30 Twenty-five times a prime number
32 Mean of 5 down and 3 down
33 Four times a prime number
3414 across minus 33 across
37 Mean of 22 down and 7 down
39 Mean of 24 up and 52 up
43 Twice a prime number
46 Mean of 37 up and 44 across
49 Twice the result of 29 down plus 7 down

50 First three digits are the same as first three digits of 46 across
51 Three times a prime number
52 Sum of digits in 20 across
5312 across minus 46 up
54 Three times a prime number

## Down (continued)

18 Twenty-three times a prime number
196 down plus 5 up
22 Mean of 47 down and 18 across
26 A palindrome
2830 down plus half of 27 across
29 Seven hundred thirty less than 32 up
3039 up minus 52 down
31 Thirty-six times a prime number
32 Half of 23 across
36 Twenty-three thousand two hundred fifteen more than 20 across
4126 up times 22 down
455 up minus 1 across
4630 down plus 34 up
4724 up minus 9 up
52 Mean of 33 across and 42 across

## Difficulty: th th th

## Puzzle 19



## Across

220 across times 32 across
5 Eleven times a prime number 755 down minus 23 across
916 across minus 7 across
11 Mean of 33 down and 19 down 1341 up minus 22 up

1619 down minus 43 down
18 Mean of 16 across and 63 across
2054 across plus 56 across
23 Mean of 58 across and 28 across
268 up plus 55 up

## Up

6 Sum of digits in 32 down
865 up minus 35 up
109 across minus 45 down
1213 across plus 36 across
1767 up minus 42 across
20 First two digits are the same as 31 down
2241 up minus 35 down
2426 across plus 47 across
2557 up minus 20 down
27 Mean of 55 up and 12 down
29 Mean of 24 up and 56 up

## Down

116 across minus 21 down
2 A prime number
3 Mean of 31 down and 29 down
440 up plus 36 across
533 down plus 65 up
6 Mean of 62 down and 54 down
1220 across minus 59 down
14 A prime number
1549 across plus 22 up
17 Seventy-one times 35 up
1927 up plus 36 across

## Across (continued)

2812 up minus 53 up
3041 down plus half of 31 up
32 Mean of 39 across and 56 across
3443 down plus 61 across
36 A prime number
39 Half of 26 across, then subtract 59 down
4022 up minus 59 down
4255 down divided by fourteen
4455 down plus 29 up
476 down minus 35 down
49 Six times 59 up
51 Five times a prime number
54 Mean of 2 down and 41 down
5613 across plus 3 down
58 Mean of 31 down and 36 across
60 Mean of 68 up and 65 up
6165 up plus 64 down
63 Four times a prime number
65 Seventy-five times a prime number

## Up (continued)

31 Two-fifths of 59 down
3541 up minus 22 up
40 Twice the result of 18 across plus 44 across
41 Twice the result of 12 up minus 5 down
434 down divided by ninety-nine
4441 up plus 7 across
46 Mean of 65 up and 43 up
50 Twenty-eight times a prime number 3743 down minus 13 across
5311 across plus half of 46 up
5541 down minus 11 across
5634 across minus 23 across
57 Twice the result of 27 up plus 45 down
5966 up minus 55 down
6462 down plus half of 64 down
6532 across plus 13 across
669 across plus 58 across
67 Seventy-seven less than 38 down
681 down plus 62 down
6954 across times 1 down

## Down (continued)

2041 up minus 41 down
2131 down plus 56 across
2965 across divided by 56 up
3146 up minus 35 down
32 Fifty-one times a prime number
3343 down minus 40 across
3556 across minus 3 down

3854 down times 13 across
4137 down plus 64 down
4344 up minus 23 across
4521 down minus 9 across
48 Mean of 29 down and 41 down
52 Twice a prime number
5417 down minus 7 across
5559 up plus 61 across
5955 up minus 5 down
6233 down minus 20 down
6422 up minus 25 up

## Dificuly $\star \star \star \star \star$

## Puzzle 20



## Across

1 Fourteen times a prime number
5 Seventy-two times 42 up
819 down plus 37 across
1032 across plus 12 across
1241 across divided by eighteen
1448 down plus 23 across
1635 up divided by 17 up
1819 down minus 47 up
1942 down minus 17 up

## Up

6 Mean of 7 up and 42 up
717 up minus 32 down
1126 across minus 46 across
1335 down plus 21 across
14 Mean of 42 up and 34 across
17 Mean of 20 up and 19 down
2039 across minus 23 across
2242 up plus 38 down
23 First two digits are the same as 3 down

## Down

1 A square
224 across divided by 44 across
349 across divided by 33 up
4 Seventy-seven times a prime number
526 across plus 20 down
9 First three digits are the same as 43 up
1339 across plus 42 up
15 Square root of 27 down
1752 across minus 36 up

## Across (continued)

2138 down minus 1 down
2350 down minus 18 across
2429 up times 44 across
2647 across minus 7 up
28 Mean of 23 down and 7 up
30 Fifteen times a prime number
32 Mean of 22 down and 15 down
3455 up minus 31 down
3729 up plus 54 up
3920 down plus 23 across
41 Twice the result of 35 down plus 2245 Mean of 14 up and 31 down down
4322 up minus 12 across
4414 up minus 48 down
46 Mean of 43 across and 54 up
4729 up plus 27 up
49 Thirty-eight times a prime number
52 A prime number

Up (continued)
2713 down minus 55 up
2843 up plus 45 up
2923 across plus 26 across
315 down minus 6 up
33 Mean of 46 across and 7 up
35 Sixty-two times a square
36 A prime number
38 Twenty times a prime number
4225 down minus 23 up
434 down minus half of 5 across

47 Mean of 31 down and 29 down
51 Thirteen thousand two hundred seven less than 52 across
52 A prime number
5328 across minus 14 across
5437 across minus 2 down
556 up plus 19 down

## Down (continued)

1922 up minus 23 across
20 Mean of 32 down and 33 up
22 A square
2316 across plus 50 down
25 First two digits are the same as 3 down
27 A square
28 First two digits are the same as 22 down
2947 across minus 31 up
3145 up minus 1 down
3221 across plus half of 15 down
3546 across plus 14 across
38 Half of 53 up, then subtract 18 across
40 Twice a prime number
4243 up minus 47 up
4545 up plus 47 across
4845 down divided by 32 across
5032 across plus 44 across

## Difficulty: th th th

## Puzzle 21



## Across

1 Two thousand eight hundred eighty-one more than 57 up
6 Eighty-seven times a prime number
11 Mean of 50 across and 22 across 1355 down plus 59 up
15 Mean of 5 down and 51 down
1638 across plus 43 across
17 Mean of 15 down and 26 down 1857 up divided by 23 up
19 Mean of 44 across and 40 across
2142 down minus 18 across
2254 down minus 26 down

## Up

716 across minus 22 across
851 down minus 33 across
9 Three-fifths of 17 up
12 A prime number
1453 across divided by 56 down
1754 down minus 33 across
1932 down minus 47 across
21 Mean of 9 up and 44 across
22 Twice a prime number
2357 up divided by 21 up
25 Mean of 7 up and 14 down

## Down

1 Mean of 33 across and 39 up
221 across minus 33 across
342 across minus 21 up
432 up plus 17 up
540 across minus 31 across
1036 up plus 35 up
11 Mean of 9 up and 22 across
12 Twenty-nine times 11 across
1434 down plus 27 across
1557 up divided by 23 up
1661 up times 38 across

## Across (continued)

24 Thirteen thousand five hundred sixty-six more than 35 across
27 Mean of 39 up and 15 across
28 Mean of 41 up and 4 down
31 Three times a prime number
3343 up minus 60 up
35 Fifteen times a prime number
38 Same as 39 across
3918 across minus 22 across
40 Twice a prime number
42 A square

43 Twice 15 across
44 Mean of 17 across and 16 across
4751 down plus 55 down
486 across minus 53 across
5049 down minus 19 up
5314 up times 1 down
58 Twice the result of 33 down plus 206116 down divided by 39 across down

## Up (continued)

322 down plus 11 across

35 Nineteen times a prime number
36 Twenty-six times a prime number
39 Mean of 48 across and 7 up
41 Seventeen times a prime number
4359 up minus 9 up
45 A prime number
46 Sum of digits in 51 up
48 Mean of 33 across and 21 up
49 Twenty-eight times a prime number
517 up times 5 down
52 Twice the result of 56 down minus 15 across
57 Thirty-three times a prime number
5821 up plus 39 across
5917 up plus 7 up
6018 across plus 17 across

## Down (continued)

1835 across minus 1 across

19 Three times a prime number
20 First two digits are the same as 9 up
26 Mean of 33 across and 38 across
2942 across plus 48 up
30 Seventy-three times 47 down
3247 across plus 17 up
3336 up plus 4 down
34 Eight times a prime number
37 Six hundred eighteen less than 31 across
42 A square
4759 up plus 33 across
4950 across plus 17 up
51 A cube
54 Mean of 17 across and 5 down
55 Mean of 7 up and 43 up
56 Mean of 46 up and 13 across

## Difficulty: th th th

## Puzzle 22



## Across

1 Twenty-one times a prime number 6 A prime number
98 down plus half of 32 down
1221 across plus 33 across
1433 across reversed
1519 up minus 58 up
18 A square
2132 down minus 3 down
23 A prime number
25 Sixteen thousand six more than 19 up

## Up

726 down minus 52 up
10 Mean of 5 down and 21 across
11 Same as 18 down
1638 across minus 52 up
1751 down plus 32 down
19 Twenty thousand seventy-five less than 56 across
22 Mean of 56 up and 5 down
23 Sixty-five times a prime number
24 A prime number
27 Fifty-eight times a prime number

## Down

1 A prime number
2 Four times a prime number
351 down minus 29 across
4 Twenty-three times a prime number
5 Mean of 16 up and 14 across
8 Five times a prime number
942 down plus half of 14 across
10 A square
13 Forty-six times a prime number
14 Mean of 19 down and 44 up

## Across (continued)

2852 up minus 30 across

2928 across minus 45 down
3025 across divided by 23 across
3139 across divided by 10 down
3331 across plus 10 down
35 Consecutive digits unordered
38 Mean of 37 up and 50 down
3910 down times 43 up

41 Twice a prime number

4351 up plus 57 up
4648 up minus 5 down
47 A prime number
49 Seven times a prime number
531 across minus 20 down
56 Four thousand sixty-nine more than 59 Forty-six less than 52 up
25 across

## Up (continued)

36 Three thousand five hundred fortynine more than 14 down
37 A prime number
39 A prime number
426 across times 46 across
4348 up minus 54 down
44 Forty-three times a prime number
47 Seventy-five times 33 across
48 Twice the result of 18 down minus 59 up
51 One thousand five hundred twentyfour more than 34 down
5242 down minus 16 up
55 Forty-one times a prime number
56 A square
57 Twice a prime number
58 A prime number

## Dificully $\star \star \star \star \star$

## Puzzle 23



## Across

1 Mean of 43 down and 36 up
345 down minus 55 across

## Up

812 across minus 55 up 9 A square
1048 down minus 35 across

1111 down plus 45 down
13 Nine hundred eighty-four more than 7 across
1554 up plus 52 across
16 Mean of 39 across and 37 across
19 Rearranged digits of 50 up
2752 across minus 6 across
29 Mean of 48 down and 21 across

## Down

122 down minus 19 up
223 down minus 11 down
3 Seven times a prime number
4 A square
550 up reversed

624 across minus 29 down
9 Mean of 35 across and 53 up
1151 across divided by five
17 Mean of 6 across and 10 up
19 Eight thousand eight hundred thirty-nine more than 40 up

## Across (continued)

2637 up plus 57 up
28 Mean of 39 across and 38 up
29 Nine times a prime number
30 Four times a prime number
3252 across minus 35 across
33 Last two digits are the same as last two digits of 15 up
3529 up minus 43 down
3727 down plus 10 up
3932 up minus 29 down
42 Mean of 52 across and 11 up
454 down plus 32 across
4719 down minus half of 9 across
50 Ninety-one times a prime number
51 Mean of 25 down and 39 across
52 Mean of 6 across and 55 up
55 Twice the result of 41 up minus 325741 up plus 28 across up

## Up (continued)

32 Mean of 55 up and 42 across
34 Sixty-seven times a prime number
3629 up plus 21 across
37 Seven thousand one hundred fortyeight less than 33 across
3817 down minus 9 down
40 Sixty-one times a prime number
41 Mean of 40 down and 25 down
43 A prime number
48 A square
50 Twice the result of 1 across plus 434041 up minus 49 down down
52 Mean of 13 up and 23 down
53 Three-fifths of 49 down
54 One-fourth of 30 across
5527 up plus 52 across
5632 up plus 11 up

## Down (continued)

20 Mean of 38 down and 29 across
2254 up plus 30 across
2317 down plus 43 down
24 First two digits are the same as first two digits of 55 up
2535 across plus 55 across
276 down plus 18 across
2948 down minus 11 down
31 A prime number
38 Sixty-one times a prime number

4332 across plus 27 up
44 Eight times a prime number
45 Twice a prime number
46 Mean of 23 down and 15 up
4816 up plus 21 across
4911 down minus 32 across

## Difficulty: th th th

## Puzzle 24



## Across

110 down minus half of 45 up
3 Mean of 58 down and 39 across
5 Mean of 47 up and 12 up
8 Mean of 6 down and 9 down
11 Twenty times a prime number
1463 down minus half of 60 up
1637 down plus 25 down
1922 across minus 13 up
2030 across plus 26 down
2266 up plus 46 across

## Up

617 down minus 49 up
7 Mean of 22 across and 3 across
10 A square
12 Mean of 21 up and 6 up
133 across minus 64 up
15 Twice a prime number
1720 across minus 64 up
18 Twice the result of 4 down minus 38 up
2126 down plus 42 up
2638 down minus 22 across

## Down

160 up minus 26 up
226 across reversed
4 First two digits are the same as 31 up
6 Mean of 6 up and 21 up
726 across plus 32 across
928 across plus 62 down
1049 down plus 23 down
15 Mean of 52 across and 45 up
1749 down plus 45 up
1936 across times 47 down

## Across (continued)

2468 up minus 19 across

2623 down minus 62 down
28 Mean of 60 up and 24 across
3049 up plus 45 up
327 down minus 41 across
33 Nineteen times a prime number
3618 up minus 59 up
3946 across plus half of 49 down
4136 across minus 62 down

4362 down minus 40 down
4459 up plus 40 up
4642 up minus 41 across
4838 down minus 49 down

5031 up minus 7 down
52 Mean of 34 down and 35 up
54 A square
5667 up minus 44 across
598 across minus 14 across
61 Last two digits are the same as 48 across
656 down plus 67 across
67 Mean of 62 down and 59 across

## Up (continued)

27 Mean of 1 across and 52 across

317 down plus 27 down
3457 down minus 21 up
3545 up minus 36 across
38 A prime number
4032 across minus 13 up
42 Mean of 52 across and 24 across
45 Three-fifths of 18 up
47 First two digits are the same as 55 down

4931 up minus 37 down
5122 across minus 24 across
53 Mean of 48 across and 50 across
55 Three hundred ninety-eight more than 47 up
56 Half of 57 down, then subtract 26 up
57 Mean of 18 up and 57 down
5941 across plus 1 down
60 Mean of 9 down and 49 down
6432 across minus 67 across
6665 across minus 2 down

67 Twice a prime number
68 Same as 58 down

## Down (continued)

21 First two digits are the same as 59 across
2347 down minus 59 across
2524 across reversed
26 A square
2755 down minus 3 across
29 Mean of 54 across and 16 across
3168 up times 31 up
3465 across minus 10 up
351 down minus 52 across

3738 down minus 49 up
3831 down divided by 58 down
4042 up minus 34 down
45 Nineteen times a prime number
4717 down plus 26 across
4968 up minus 29 down
5545 up plus 36 across
5628 across minus 27 down
5751 up plus 29 down
5829 down plus 49 down
6228 across minus 56 up
6362 down plus 26 down

## Solutions

Puzzle 1


Puzzle 3


Puzzle 5


Puzzle 2


Puzzle 4


Puzzle 6


Puzzle 7


Puzzle 9


Puzzle 11


Puzzle 8


Puzzle 10


Puzzle 12


Puzzle 13


Puzzle 15


Puzzle 17


Puzzle 14


Puzzle 16


Puzzle 18


Puzzle 19


Puzzle 21


Puzzle 23


Puzzle 20


Puzzle 22


Puzzle 24


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## Acknowledgements

This book could not be possible without a lot of help, especially from the following:
Jim Bumgardner (krazydad) whose excellent site http://krazydad.com provided many hours of enjoyment and inspired me to create puzzles of my own. He has also been very generous providing tips and support.

Yochanan Dvir whose cross-figure puzzles formed the reference material for the puzzles.
Jared McComb (bosuonparedo) who started me down the path to create the hexagonal puzzles. Phil Bordelon (Sunfall) who suggested the name TripleCross.

Dave Millar (Taco Dave) who suggested I create books.
All the users on the krazydad discord server who tested the puzzles and gave feedback.
Norma for her suggestions and editing help.
Sora Sagano for the Aileron font.
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